

## **4.7 Hypoglycaemic and hypolipidaemic activities of a polyherbal formulation (DML 10) in dietary induced hyperlipidaemic rats**

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### **ABSTRACT**

The present study was conducted to evaluate the effect of a polyherbal formulation (DML10) consisting of 12 medicinal plant materials on serum glucose levels and serum lipid levels in dietary induced hyperlipidaemic rats. Wistar albino rats were made hyperlipidaemic by giving cholesterol rich diet for one month and same diet was continued during the period of experiment. They were randomly divided into four groups (n=10) and one group was orally administered with DML10 (10.8 ml/kg/day; strength: 65±0.54mg/ml in dry weight of the decoction) for 14 consecutive days. Two groups (positive control groups) received Simvastatin (0.9 mg/kg/day) or Fenofibrate (18 mg/kg/day) orally and the placebo group received only comparable volumes of distilled water for 14 consecutive days. Serum glucose levels and lipid levels were determined using standard methods. All rats showed significant increase in fasting glucose level and fasting total cholesterol level after feeding with cholesterol rich for one month. The fasting glucose level of the test group treated with DML 10 was significantly decreased by 25% in comparison to the placebo control group. The positive control groups which received Simvastatin showed no significant decrease in fasting glucose level while Fenofibrate showed a significant decrease (14%) in fasting glucose level. Total cholesterol, triglyceride and LDL levels in the sera of the group treated with DML10 were reduced to 33%, 54% and 67% of the placebo control group whereas corresponding decreases in the sera of positive control groups were 38-39%, 36% and 52-77% respectively. The result revealed that short term administration of DML 10 could reduce fasting glucose levels and fasting lipid levels (except HDL) in the sera of dietary induced hyperlipidaemic rats.